

## **P201 /202 – IMPACT OF TOLERANCE BAND ON IMBALANCE CASHFLOWS**

### **Approach:**

The following information illustrates the potential impact of P201 and P202 via consideration of a range of sample Settlement Periods. A number of possible sets of alternative qualification rules are considered.

A range of Settlement Periods was selected according to the following criteria (applied over the period 1 April 05 to 31 March 06):

1. Long (Most Negative NIV)	31/12/2005 period 17
2. Short (Most Positive NIV)	30/12/2005 period 26
3. Neutral (Smallest Magnitude NIV)	01/09/2005 period 22
4. Highest SBP	29/12/2005 period 36
5. Lowest SSP	18/10/2005 period 34
6. Randomly Selected	17/09/2005 period 32
7. Average SBP (£50)	14/10/2005 period 34
8. Average SSP (£34)	07/02/2006 period 34

The impact from 10 to 30 December 2004 was also considered to illustrate the effect of the proposals over an extended period (2004 data was used since P194 Imbalance Price data was available).

### **Qualification Rules:**

The following section considers Parties qualifying under the various different sets of qualification criteria considered.

#### **Approach 1: Qualification (Proposed Modification)**

Trading Party Groups were identified. A Trading Party Group is currently used for grouping BSC Parties for the purpose of allocating votes in BSC Panel elections. The BSC states that a Trading Party Group is a group comprised of a Trading Party and every Affiliate of that Trading Party. The BSC defines "Affiliate" as: any holding company of that Party, any subsidiary of that Party or any subsidiary of a holding company of that Party, (within the meaning of sections 736, 736A and 736B of the Companies Act 1985).

Each Trading Party Group containing at least one Supplier Party (i.e. a Party registered in the market role of 'Supplier') was allowed to contain one Qualifying Party. The Qualifying Party was chosen to be the Party within the relevant Trading Party Group with the largest average imbalance exposure.

The Consumption Account of each Qualifying Party was then assigned a tolerance band of 20MWh. The number of Qualifying Energy Accounts was 25 of 260. Qualifying Parties and the average magnitude of the imbalance volume on its associated consumption Energy Account over the period 1 April 05 to 31 March 06 are identified in the table below:

Approach 1- Qualifying Parties				
Party ID	Party Name	Average Magnitude Imbalance Volume	MIN (Average Magnitude Imbalance Volume, 20)	MIN(Trading Group Average Credited Energy, 20)
BEPET001	BE Power & Energy Trading Ltd	29	20	20
POWERGEN	E.ON UK plc	91	20	20
SSE	SSE Energy Supply Limited	49	20	20
NPOWER01	Npower Limited	59	20	20
LONDELEC	EDF Energy PLC	67	20	20
BRITGAS	British Gas Trading Ltd	75	20	20
SPOWER02	SP Energy Management Ltd	66	20	20
RWETDL	Gaz de France Marketing Ltd	24	20	20
FELLSIDE	British Nuclear Group Fellside	0	0	20
TFEGP	Total Gas & Power Ltd	4.5	4.5	20
BIZZ	BizzEnergy Ltd	6.8	6.8	20
ICICP	ICI C&P Limited	0	0	20
SMARTEST	Smartestenergy Limited	8.2	8.2	20
OXFPOWER	Opus Energy Limited	4.8	4.8	20
SEEL	Sempra Energy Europe Ltd	0.38	0.38	20
RENC	The Renewable Energy Co Ltd	1.14	1.14	7
ZEST4444	ZEST4 Electricity Ltd	2.25	2.25	3
MSCGI	Morgan Stanley	0.23	0.23	1
UTILITA	Utilita Electricity Limited	0.83	0.83	1
EOCA	Electricity 4 Business Ltd	0.011	0.011	0
FOR	Fortum Direct Ltd	0.008	0.008	0
TEAM01	Team	0.031	0.031	0
PURE	Good Energy Limited	0	0	0
ENDC	Energy Data Company Limited	0	0	0
GLAC	Corona Energy Retail 4 Ltd	0	0	0
	<b>Total</b>	<b>490</b>	<b>190</b>	<b>312</b>

## Approach 2: Restricted Qualification (Potential Alternative Modification 1)

Trading Party Groups were identified. Each Trading Party Group containing at least one Supplier Party (i.e. Parties registered in the market role of 'Supplier') and with an average total magnitude of credited energy less than 750MWh was allowed to contain one Qualifying Party. The Qualifying Party was chosen to be the Party within the relevant Trading Party Group with the largest average imbalance exposure.

The Consumption Account of each Qualifying Party was then assigned a tolerance band of 20MWh. The number of Qualifying Energy Accounts was 18 of 260. Qualifying Parties and the average magnitude of the imbalance volume on its associated consumption Energy Account over the period 1 April 05 to 31 March 06 are identified in the table below:

<b>Approach 2 - Qualifying Parties</b>				
<b>Party ID</b>	<b>Party Name</b>	<b>Average Magnitude Imbalance Volume</b>	<b>MIN (Average Magnitude Imbalance Volume, 20)</b>	<b>MIN(Trading Group Average Credited Energy, 20)</b>
FELLSIDE	British Nuclear Group Fellside	0	0	20
TFEGP	Total Gas & Power Ltd	4.5	4.5	20
BIZZ	BizzEnergy Ltd	6.8	6.8	20
ICICP	ICI C&P Limited	0	0	20
SMARTTEST	Smartestenergy Limited	8.2	8.2	20
OXFPOWER	Opus Energy Limited	4.8	4.8	20
SEEL	Sempra Energy Europe Ltd	0.38	0.38	20
RENC	The Renewable Energy Co Ltd	1.14	1.14	7
ZEST4444	ZEST4 Electricity Ltd	2.25	2.25	3
MSCGI	Morgan Stanley	0.23	0.23	1
UTILITA	Utilita Electricity Limited	0.83	0.83	1
EOCA	Electricity 4 Business Ltd	0.011	0.011	0
FOR	Fortum Direct Ltd	0.008	0.008	0
TEAM01	Team	0.031	0.031	0
PURE	Good Energy Limited	0	0	0
ENDC	Energy Data Company Limited	0	0	0
GLAC	Corona Energy Retail 4 Ltd	0	0	0
	<b>Total</b>	<b>29</b>	<b>29</b>	<b>152</b>

### **Approach 3: Expanded Qualification (Potential Alternative Modification 2)**

Trading Party Groups were identified. Each Trading Party Group was allowed to contain one Qualifying Party. The Qualifying Party was chosen to be the Party within the relevant Trading Party Group with the largest average imbalance exposure.

Both the Consumption and Production Account of each Qualifying Party were then assigned a tolerance band of 20MWh. The number of Qualifying Energy Accounts was 144 of 260. Total Qualifying Volumes, average magnitude imbalance volumes and Credited Energy for qualifying accounts are identified below:

**Total Average Magnitude Imbalance Volume = 773 MWh**

**Total Min (Average Magnitude Imbalance Volume, 20) = 409 MWh**

**Total Min (Trading Group Average Credited Energy, 20) = 1,396 MWh**

### **Approach 4: Alternative Modification Qualification Rules**

Trading Party Groups were identified. Each Trading Party Group was allowed to contain one Qualifying Party. The Qualifying Party was chosen to be the Party within the relevant Trading Party Group with the largest average imbalance exposure.

One of either the Consumption OR Production Energy Account of each Qualifying Party was then assigned a tolerance band of 10MWh (based on assigning the band to the account with the largest average imbalance volume). The number of Qualifying Energy Accounts was 73 of 260. Total Qualifying Volumes, average magnitude imbalance volumes and Credited Energy for qualifying accounts are identified below:

**Total Average Magnitude Imbalance Volume = 589 MWh**

**Total Min (Average Magnitude Imbalance Volume, 10) = 203 MWh**

**Total Min (Trading Group Average Credited Energy, 10) = 409 MWh**

### **Extended Date Range:**

The various different sets of qualification rules were then applied over the period 10-30 December 2004 in order to identify qualifying volumes and cashflow impact.

### **APPROACH 1 – Proposed Modification (10-30 Dec 2004)**

#### **Totals:**

Net P194 Imbalance Cashflow: £1.46m

Net P201 Imbalance Cashflow: £1.35m

Net P202 Imbalance Cashflow: £900k

Total P201 Financial Benefit to Qualifying Parties: £114k

Total P202 Financial Benefit to Qualifying Parties: £563k

Total Absolute Imbalance Volume: 935 GWh

Total Absolute P201 Qualifying Volume: 20 GWh (2%)

Total Absolute P202 Qualifying Volume: 114 GWh (12%)

Period Stats:

	Average	Max	Min	STDEV
Period Total Absolute Imbalance Volume	927	2,400	319	316
Magnitude of Net Imbalance Volume	391	1,600	1.3	297
Magnitude of P202 Qualifying Volume (Settlement Periods where market was long only)	118	200	30	32
Magnitude of P201 / P202 Qualifying Volume (for Settlement Periods where market was short only)	93	154	27	24

**APPROACH 2 – Restricted Qualification (10-30 Dec 2004)**

Totals:

Net P194 Imbalance Cash Flow: £1.46m

Net P201 Imbalance Cashflow: £1.44m

Net P202 Imbalance Cashflow: £1.37m

Total P201 Financial Benefit to Qualifying Parties: £19k

Total P202 Financial Benefit to Qualifying Parties: £95k

Total Absolute Imbalance Volume: 935 GWh

Total Absolute P201 Qualifying Volume: 3 GWh (0.3%)

Total Absolute P202 Qualifying Volume: 19 GWh (2%)

Period Stats:

	Average	Max	Min	STDEV
Period Total Absolute Imbalance Volume	927	2,400	319	316
Magnitude of Net Imbalance Volume	391	1,600	1.3	297
Magnitude of P202 Qualifying Volume (Settlement Periods where market was long only)	19	58	0.008	12
Magnitude of P201 / P202 Qualifying Volume (Settlement Periods where market was short only)	15	43	0.3	10

**APPROACH 3 – Expanded (20MWh) (10-30 Dec 2004)**

Totals:

Net P194 Imbalance Cash Flow: £1.46m

Net P201 Imbalance Cashflow: £1.28m

Net P202 Imbalance Cashflow: £480k

Total P201 Financial Benefit to Qualifying Parties: £180k

Total P202 Financial Benefit to Qualifying Parties: £990k

Total Absolute Imbalance Volume: 935 GWh

Total Absolute P201 Qualifying Volume: 30 GWh (3%)

Total Absolute P202 Qualifying Volume: 198 GWh (21%)

Period Stats:

	Average	Max	Min	STDEV
Period Total Absolute Imbalance Volume	927	2,400	319	316
Magnitude of Net Imbalance Volume	391	1,600	1.3	297
Magnitude of P202 Qualifying Volume (Settlement Periods where market was long only)	212	335	108	42
Magnitude of P201 / P202 Qualifying Volume (Settlement Periods where market was short only)	141	236	71	31

**APPROACH 4 – ALTERNATIVE MODIFICATION (10-30 Dec 2004)**

Totals:

Net P194 Imbalance Cash Flow: £1.46m

Net P201 Imbalance Cashflow: £1.44m

Net P202 Imbalance Cashflow: £1.21m

Total P201 Financial Benefit to Qualifying Parties: £18.6k

Total P202 Financial Benefit to Qualifying Parties: £226k

Total Absolute Imbalance Volume: 935 GWh

Total Absolute P201 Qualifying Volume: 3.3 GWh (0.35%)

Total Absolute P202 Qualifying Volume: 46 GWh (5%)

Period Stats:

	Average	Max	Min	STDEV
Period Total Absolute Imbalance Volume	927	2,400	319	316
Magnitude of Net Imbalance Volume	391	1,600	1.3	297
Magnitude of P202 Qualifying Volume (Settlement Periods where market was long only)	53	90	20	13
Magnitude of P201 / P202 Qualifying Volume (Settlement Periods where market was short only)	15	43	0.3	10

**Sample Settlement Periods**

Approaches 1-3 were applied to the range of sample Settlement Period previously identified.

NB: The total P202/201 Imbalance Cashflow impact illustrates the financial benefit to qualifying Parties. This amount is recovered from all Parties (including qualifying Parties) in proportion to their metered volumes in the affected Settlement Period via the RCRC.

**Settlement Period 1 – Most Negative NIV**

NB: P201 has no impact in this Settlement Period since the market was long.

Settlement Date	31 December 2005
Settlement Period	17
NIV (MWh)	-1810
SBP (£/ MWh)	£33.38

P194 SBP (£/ MWh)	£33.38
SSP (£/ MWh)	£25.21
P194 SSP (£/ MWh)	£22.07
Market Price (£/ MWh)	£33.38
Tolerance Price (£/ MWh)	£30.04

### **Cashflow Impact Summary:**

#### Approach 1:

Net Imbalance Cashflow (P194 Baseline) = -£39.6k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£40.8k  
P202 Total Imbalance Cashflow Impact = -£1.2k  
Total Qualifying Volume = 155

#### Approach 2:

Net Imbalance Cashflow (P194 Baseline) = -£39.6k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£39.8k  
P202 Total Imbalance Cashflow Impact = -£278  
Total Qualifying Volume = 35 MWh

#### Approach 3:

Net Imbalance Cashflow (P194 Baseline) = -£39.6k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£41.8k  
P202 Total Imbalance Cashflow Impact = -£2.2k  
Total Qualifying Volume = 279 MWh

### **Settlement Period 2 – Most Positive NIV**

NB: P201 and P202 have the same impact in this Settlement Period as the market was short.

Settlement Date	30 December 2005
Settlement Period	26
NIV (MWh)	1634 MWh
SBP (£/ MWh)	£141.57 / MWh
P194 SBP (£/ MWh)	£186.00 / MWh
SSP (£/ MWh)	£90.44 / MWh
P194 SSP (£/ MWh)	£90.44 / MWh
Market Price (£/ MWh)	£90.44 / MWh
Tolerance Price (£/ MWh)	£99.48 / MWh

### **Cashflow Impact Summary:**

#### Approach 1:

Net Imbalance Cashflow (P194 Baseline) = £316k  
Net Imbalance Cashflow (P194 + P201/2 Baseline) = £301k  
P201/2 Total Imbalance Cashflow Impact = -£15k  
Total Qualifying Volume = -170

#### Approach 2:

Net Imbalance Cashflow (P194 Baseline) = £316k  
Net Imbalance Cashflow (P194 + P201/2 Baseline) = £315k  
P201/2 Total Imbalance Cashflow Impact = -£897  
Total Qualifying Volume = -10

Approach 3:

Net Imbalance Cashflow (P194 Baseline) = £316k

Net Imbalance Cashflow (P194 + P201/2 Baseline) = £293k

P201/2 Total Imbalance Cashflow Impact = -£22.4k

Total Qualifying Volume = -260 MWh

**Settlement Period 3 – Smallest Magnitude NIV**

Settlement Date	1 September 2005
Settlement Period	22
NIV (MWh)	0.1
SBP (£/ MWh)	38.05
P194 SBP (£/ MWh)	38.05
SSP (£/ MWh)	38.05
P194 SSP (£/ MWh)	38.05
Market Price (£/ MWh)	38.05
Tolerance Price (£/ MWh)	38.05

**Cashflow Impact Summary:**

In this Settlement Period there is no impact from either proposal under any of the approaches considered since, due to defaulting rules, all prices are equal.

**Settlement Period 4 – Highest SBP**

NB: P201 and P202 have the same impact in this Settlement Period as the market was short.

Settlement Date	29 December 2005
Settlement Period	36
NIV (MWh)	1117 (Market Short)
SBP (£/ MWh)	601
P194 SBP (£/ MWh)	1,500
SSP (£/ MWh)	477
P194 SSP (£/ MWh)	477
Market Price (£/ MWh)	477
Tolerance Price (£/ MWh)	525

**Cashflow Impact Summary:**

Approach 1:

Net Imbalance Cashflow (P194 Baseline) = £1.8m

Net Imbalance Cashflow (P194 + P201/2) = £1.65m

P201/2 Total Imbalance Cashflow Impact = -£646k

Total Qualifying Volume = -156 MWh

Approach 2:

Net Imbalance Cashflow (P194 Baseline) = £1.8m

Net Imbalance Cashflow (P194 + P201/2) = £1.8m

P201/2 Total Imbalance Cashflow Impact = -£6k

Total Qualifying Volume = -6 MWh



Approach 3:

Net Imbalance Cashflow (P194 Baseline) = £1.8m

Net Imbalance Cashflow (P194 + P201/2) = £1.6m

P201/2 Total Imbalance Cashflow Impact = £200k

Total Qualifying Volume = -203 MWh

**Settlement Period 5 – Lowest SSP**

NB: P201 has no impact in this Settlement Period since the market was long.

Settlement Date	18 October 2005
Settlement Period	34
NIV (MWh)	-512
SBP (£/ MWh)	43.28
P194 SBP (£/ MWh)	43.28
SSP (£/ MWh)	-20.53
P194 SSP (£/ MWh)	-50.00
Market Price (£/ MWh)	43.28
Tolerance Price (£/ MWh)	38.95

**Cashflow Impact Summary:**

Approach 1:

Net Imbalance Cashflow (P194 Baseline) = £35k

Net Imbalance Cashflow (P194 + P202 Baseline) = £22k

P202 Total Imbalance Cashflow Impact = -£13k

Total Qualifying Volume = 141 MWh

Approach 2:

Net Imbalance Cashflow (P194 Baseline) = £35k

Net Imbalance Cashflow (P194 + P202 Baseline) = £32k

P202 Total Imbalance Cashflow Impact = -£3k

Total Qualifying Volume = 34 MWh

Approach 3:

Net Imbalance Cashflow (P194 Baseline) = £35k

Net Imbalance Cashflow (P194 + P202 Baseline) = £10k

P202 Total Imbalance Cashflow Impact = -£25k

Total Qualifying Volume = 276 MWh

**Settlement Period 6 – Randomly Selected**

NB: P201 has no impact in this Settlement Period since the market was long.

Settlement Date	17 September 2005
Settlement Period	32
NIV (MWh)	-553
SBP (£/ MWh)	28.55
P194 SBP (£/ MWh)	28.55
SSP (£/ MWh)	25.75
P194 SSP (£/ MWh)	25.25
Market Price (£/ MWh)	28.55

Tolerance Price (£/ MWh)	25.70
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### **Cashflow Impact Summary:**

#### **Approach 1:**

Net Imbalance Cashflow (P194 Baseline) = -£14k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£14k  
P202 Total Imbalance Cashflow Impact = -£58  
Total Qualifying Volume = 131 MWh

#### **Approach 2:**

Net Imbalance Cashflow (P194 Baseline) = -£14k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£14k  
P202 Total Imbalance Cashflow Impact = -£10  
Total Qualifying Volume = 23

#### **Approach 3:**

Net Imbalance Cashflow (P194 Baseline) = -£13.7k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£13.8k  
P202 Total Imbalance Cashflow Impact = -£100  
Total Qualifying Volume = 233 MWh

### **Settlement Period 7 – Average SBP**

NB: P201 and P202 have the same impact in this Settlement Period as the market was short.

Settlement Date	14 October 2005
Settlement Period	34
NIV (MWh)	25 MWh
SBP (£/ MWh)	£50.27 / MWh
P194 SBP (£/ MWh)	£50.27 / MWh
SSP (£/ MWh)	£40.66 / MWh
P194 SSP (£/ MWh)	£40.66 / MWh
Market Price (£/ MWh)	£40.66 / MWh
Tolerance Price (£/ MWh)	£44.73 / MWh

### **Cashflow Impact Summary:**

#### **Approach 1:**

Net Imbalance Cashflow (P194 Baseline) = £5.5k  
Net Imbalance Cashflow (P194 + P202 Baseline) = £5k  
P202 Total Imbalance Cashflow Impact = -£500  
Total Qualifying Volume = -85

#### **Approach 2:**

Net Imbalance Cashflow (P194 Baseline) = £5.5k  
Net Imbalance Cashflow (P194 + P202 Baseline) = £5.5k  
P202 Total Imbalance Cashflow Impact = -£60  
Total Qualifying Volume = -11 MWh

#### **Approach 3:**

Net Imbalance Cashflow (P194 Baseline) = £5.5k

Net Imbalance Cashflow (P194 + P202 Baseline) = £3.6k  
P202 Total Imbalance Cashflow Impact = £1.9k  
Total Qualifying Volume = -334 MWh

### **Settlement Period 8 – Average SSP**

NB: P201 has no impact in this Settlement Period since the market was long

Settlement Date	7 February 2006
Settlement Period	34
NIV (MWh)	-393
SBP (£/ MWh)	£45.47 / MWh
P194 SBP (£/ MWh)	£45.47 / MWh
SSP (£/ MWh)	£34.51 / MWh
P194 SSP (£/ MWh)	£34.29 / MWh
Market Price (£/ MWh)	£45.47 / MWh
Tolerance Price (£/ MWh)	£40.92 / MWh

### **Cashflow Impact Summary:**

#### **Approach 1:**

Net Imbalance Cashflow (P194 Baseline) = -£12k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£13k  
P202 Total Imbalance Cashflow Impact = -£1k  
Total Qualifying Volume = 152

#### **Approach 2:**

Net Imbalance Cashflow (P194 Baseline) = -£12k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£12.3k  
P202 Total Imbalance Cashflow Impact = -£300  
Total Qualifying Volume = 46 MWh

#### **Approach 3:**

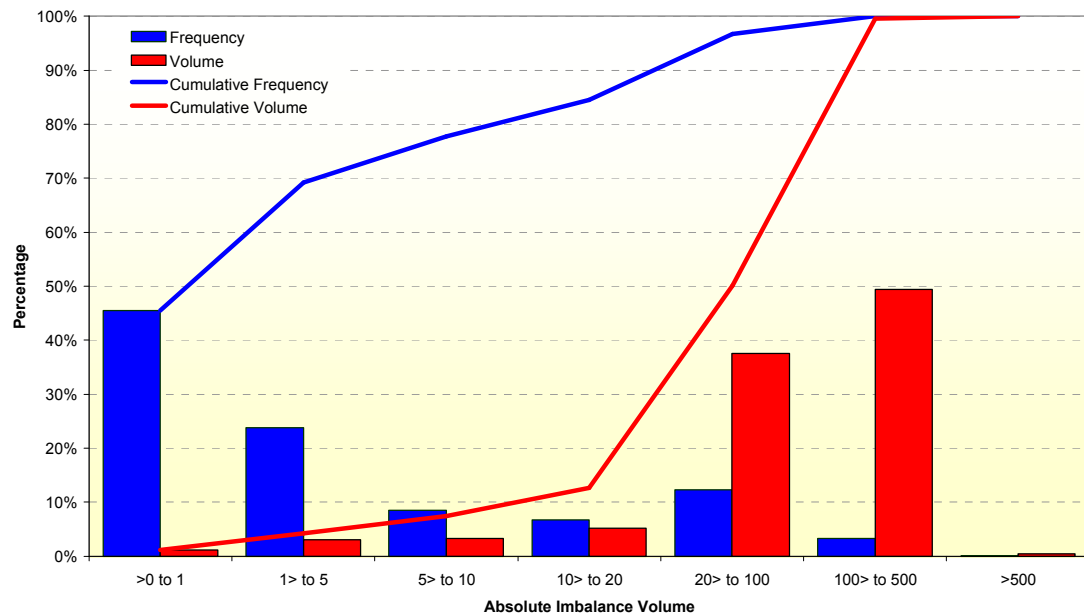
Net Imbalance Cashflow (P194 Baseline) = -£12k  
Net Imbalance Cashflow (P194 + P202 Baseline) = -£13.7k  
P202 Total Imbalance Cashflow Impact = -£1.7k  
Total Qualifying Volume = 256 MWh

## P201 /202 – Imbalance Distribution

Absolute volumes of Energy Imbalance (MWh) were identified for all Parties and Settlement Periods from 1 April 05 to 31 March 06. The graphs below illustrate the proportion of imbalance volumes at various levels (percentage values are expressed both in terms of total counts and mid class volume). The data excludes zero imbalance volumes.

**Distribution of Energy Account Imbalance Volumes (1-April-05 to 31-March 06)**

NB: Zero Volumes Excluded



**Distribution of Consumption Energy Account Imbalance Volumes (1-April-05 to 31-March 06)**

NB: Zero Volumes Excluded

